

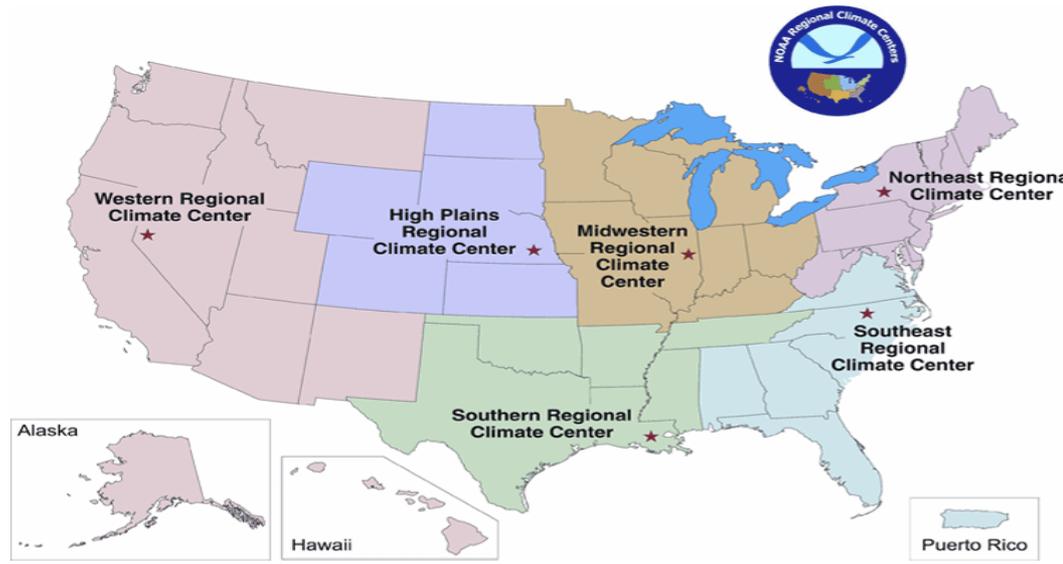
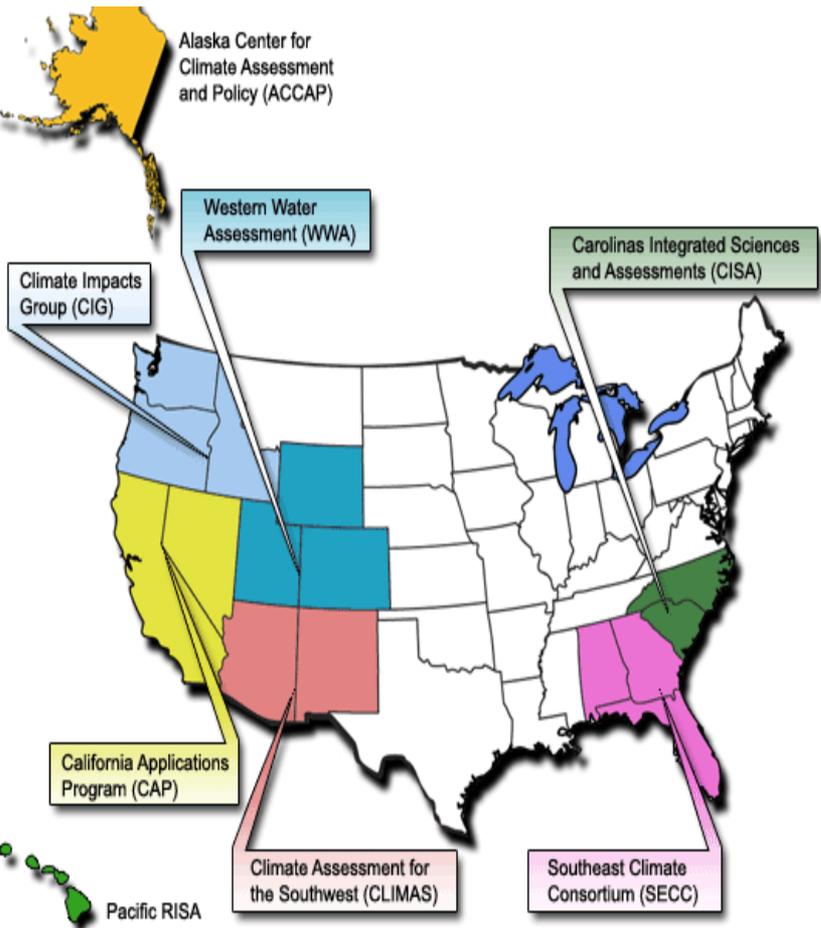
# NOAA Regional Climate Centers

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Working with NOAA partners to deliver climate services at regional levels for user-centric products, applications, interdisciplinary research, applications, and education that provide a regional focus to addressing societal needs.

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# NOAA/NESDIS Regional Climate Centers and NOAA/OAR Research



- MRCC** Illinois State Water Survey, University of Illinois - Urbana
- SERCC** University of North Carolina, Chapel Hill
- SRCC** Louisiana State University, Baton Rouge, LA
- WRCC** Desert Research Institute, University of Nevada, Reno
- NRCC** Cornell University, Ithaca, NY
- HPRCC** University of Nebraska -Lincoln

# NOAA Regional Climate Centers

## RCC History and Program Management

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- Response to National Climate Program Act of 1978
- Three demonstration projects 1981-1986
- Congressionally directed funds 1986
  - Western RCC Desert Research Institute – 1987
  - Midwestern RCC Illinois State Water Survey – 1988
  - High Plains RCC University of Nebraska – 1988
  - Northeast RCC Cornell University – 1989
  - Southeast RCC South Carolina Dept. Natural Resources – 1990
  - (Now University of North Carolina Chapel Hill)
  - Southern RCC Louisiana State University – 1990
- National Climate Program Office 1988-1991
- National Weather Service 1991-1997
- National Climatic Data Center 1997-present

# NOAA Regional Climate Centers

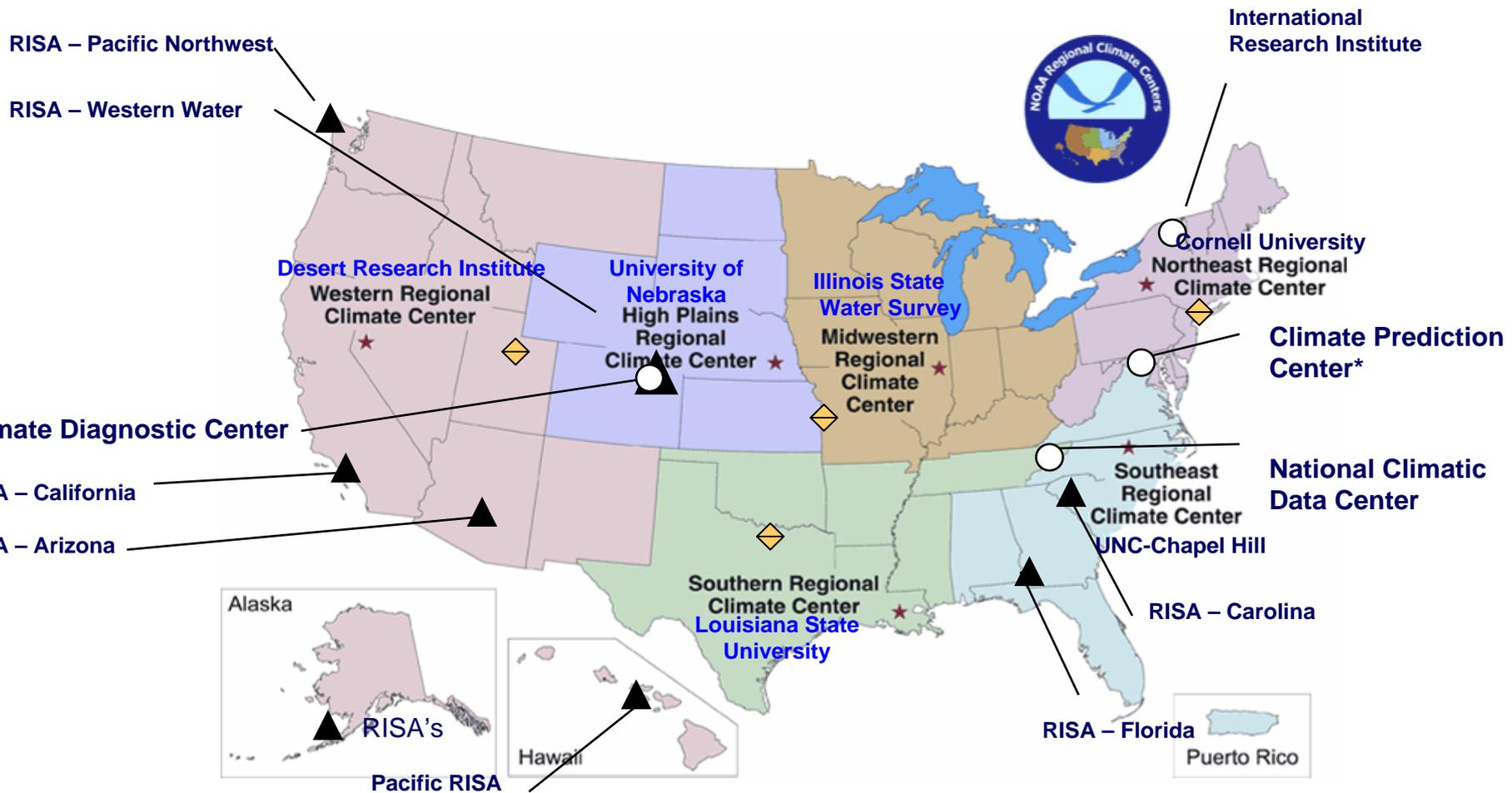
## RCC Functions – Climate Services

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- Provide general and user-defined regional and local climate products and services to external users and partners including:
  - near-real time relational database system,
  - web-based information resources.
- Provide regional and local expertise and assistance to a wide range of customers.
- Climate services tasks are iterative and evolutionary
  - Specific on-line climate information and data archival and access capabilities grow from user and partner interests and needs.
- Infrastructure strengthening
  - Specialized climate service personnel recruitment and training

# Climate Services Partnerships

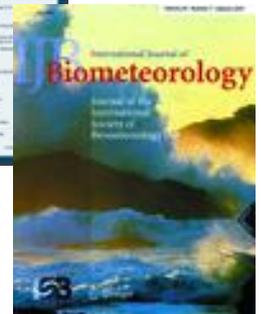
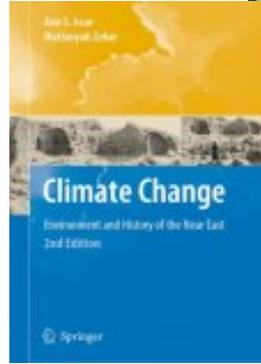
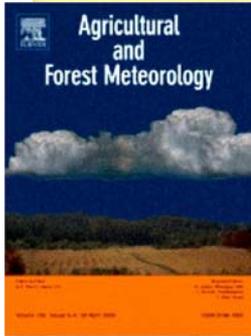
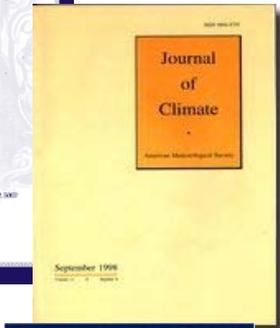
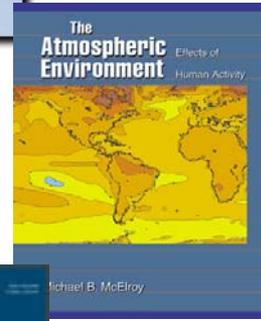
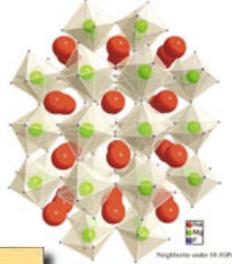
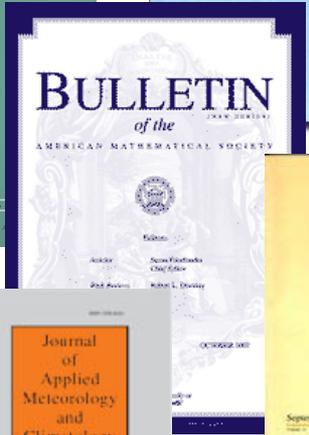
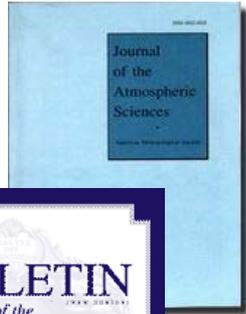
## The NOAA Community



◆ **NWS Regional HQ**

\*Climate Services Division, Climate Program Office, NOAA HQ

# NOAA/NESDIS/NCDC/RCC Climate Assessment Research

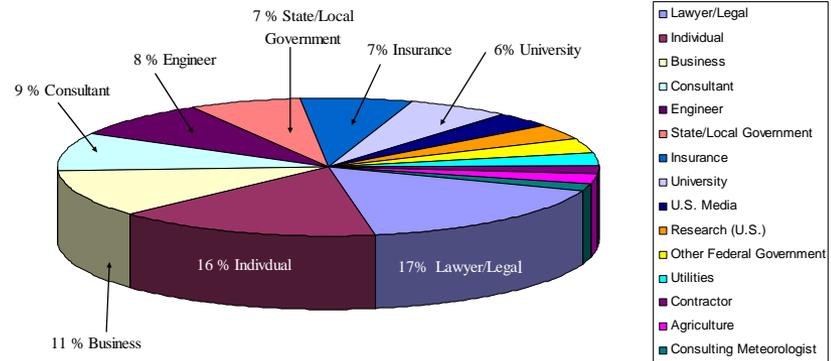


# NOAA Regional Climate Centers

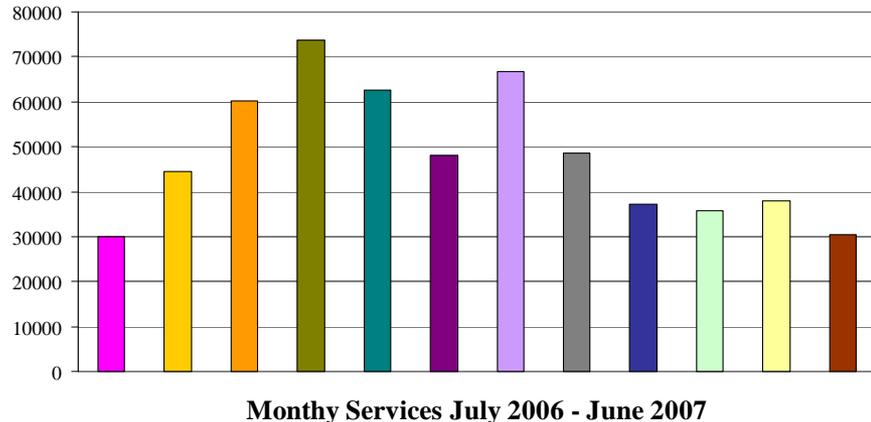
## Service Research, Education and Outreach

- Conduct outreach to regional and local decision makers on the use of climate products.
  - Building design (snow loads, soil freezing),
  - Flood management,
  - Irrigation,
  - Pest management
  - Coastal erosion
  - Water management
  - Agriculture
  - Climate change
  - Energy
  - Environment
  - Risk management
  - Transportation
  - Natural hazards

Regional Climate Centers' Customers



Regional Climate Centers Customers Served On-line



# NCDC-RCC-NWS Collaboration

## National Climate Services Data Tools



- **xmACIS** (*NWS Field Office Use*)
  - Applied Climate Information System
  - Data query tool for NWS local climate research/local product development, and to answer customer climate record inquiries
  - Complete historical climate database with near real-time update
- **agACIS** (*Custom data and products for the NCRS*)
- **NOWData** (*Customer Use*)
  - Self-service tool
  - Subset of xmACIS
  - Free, limited access
  - For current year and Normals
  - Portal for ACIS and NCDC information
- **ThreadEx** (*Open Use*)
  - Consistent daily temperature and precipitation extremes
- **Datzilla** (*Partner Use*)
  - Data discrepancy reporting
  - 400 registered NOAA users
- **WxCoder III** (*COOP Use*)
  - Internet observation entry system

Local forecast by "City, St" or Zip Code

City, St  Go

Regional Climate Centers

- High Plains RCC
- Midwest RCC
- Northeast RCC
- Southeast RCC
- Southern RCC
- Western RCC

ACIS Products

- ACIS Maps
- HPRCC CLIMOD
- NRCC CLIMOD
- SRCC CLIMOD

Other RCC Products

- MRCC MICIS
- SERCC CIRRUS

Climate Partners

- State Climatologists
- RCCs
- NCDC
- NWS

Climate Links

- NWS Climate Pages
- NOAA Climate Page

### NOWData - NOAA Online Weather Data

1. Product »	2. Location »	3. Variable »	4. Year »	5. View »
<input type="radio"/> Daily data for a month <input type="radio"/> Daily almanac <input checked="" type="radio"/> Monthly avgs/totals <input type="radio"/> Monthly occurrences <input type="radio"/> Monthly extremes <input type="radio"/> Daily extremes <input type="radio"/> Daily/monthly normals <input type="radio"/> Record extremes <input type="radio"/> First/last dates	Amity 4 NE, MO Bethany, MO Boonville, MO Brookfield, MO Brunswick, MO Butler, MO Carrollton, MO Chillicothe, MO Clinton, MO Coloma, MO	<input type="radio"/> Max Temperature <input type="radio"/> Min Temperature <input type="radio"/> Avg Temperature <input type="radio"/> Precipitation <input type="radio"/> Snowfall <input type="radio"/> Snow Depth <input type="radio"/> Heating Degree Days <input type="radio"/> Cooling Degree Days <input type="radio"/> Growing Degree Days	<input checked="" type="radio"/> Current year <input type="radio"/> Last year <input type="radio"/> 1971-2000	<input type="button" value="Go"/>

**Product Description:**  
 MONTHLY AVERAGES/TOTALS - calculates averages or totals, as appropriate, for the selected variable for each month of the year. This product is available for the current year, the previous year, or an average of the years 1971 through 2000. Additional stations and years of data are available from the Regional Climate Centers.

[Questions, comments](#)

Powered by **ACIS**  
 NOAA Regional Climate Centers

Some of the ACIS products are based on preliminary data. Official data and/or additional years/stations are available from the Regional Climate Centers and the National Climatic Data Center.  
 The Applied Climate Information System (ACIS) is a joint project of the Regional Climate Centers, the National Climatic Data Center and the National Weather Service.

# Climate Services & Supporting Research

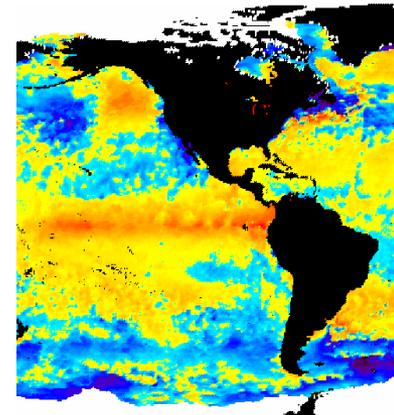
## NESDIS & NOS Climatologies

**Objective:** Develop a series of coastal climatologies that build on traditional air climatology, add marine parameters, and lead to products used by state and local managers faced with decisions that have climate-related components.

**Goal:** Conduct a pilot study focusing on the southeastern U.S., from Virginia to the Atlantic coast of Florida. Parameters of coastal climatology, and geographic and temporal scale that parameters will be reported and examined, will depend upon “core” uses of this information by managers.

### Actions:

- Conduct stakeholders workshop (Q3)
- Produce report describing core uses to guide development of data, tools, and applications of coastal climatology in southeast U.S. (Q4)
  - ✓ Core uses will include: mock-ups of applications from fishery management, mitigation of hazards, agriculture, energy conservation, water consumption, storm water management, and coastal inter-modal transportation



# Climate Services & Supporting Research

## Climate and Weather Impacts on Society and the Environment (CWISE)

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**Objective:** Conduct research to better assess the impacts of climate variability and weather events on natural systems and society.

**Goal:** Provide information, services and products to mitigate against environmental, economic, ecosystem health and human health impacts related to extreme climate conditions and atmospheric storms.

### **Actions:**

- Host user workshop
- Begin development of coastal climatology
- Initial focus on North and South Carolina
- Award NOAA cooperative agreement
- Establish partnerships and begin to engage potential users



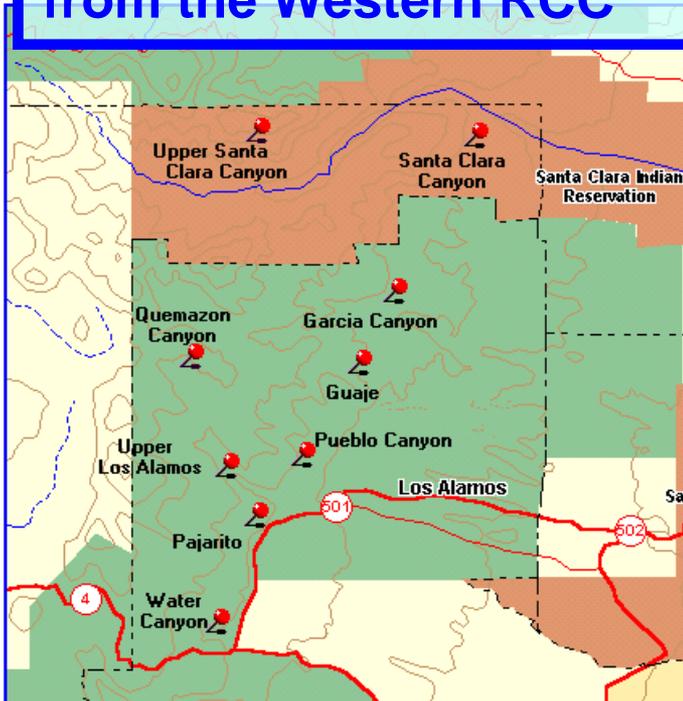


# Optimizing Climate Services Partnerships

## Partnering with Regional Climate Centers

Examples: *DATA*

### Fire Season Stations in AZ from the Western RCC



High Plains Regional Climate Center  
University of Nebraska - Lincoln

Home | Climate Data | Climate Products | Publications | About HPRCC

Automated Weather Data Network

Select a station by placing the mouse cursor over a square and clicking.  
Alternatively, use the table below to find a station.

Location:  625.0(m)

### Regional Data Network from the High Plains RCC



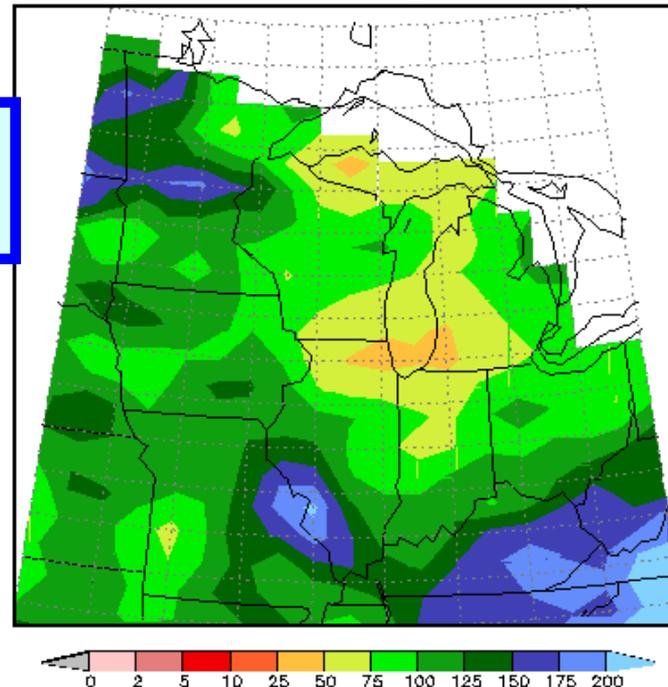
# Optimizing Climate Services Partnerships

## Partnering with Regional Climate Centers

Examples: *SERVICE*

Real-Time Regional Mapping  
from the Midwestern RCC

Total Precipitation Percent of Mean  
June 3, 2003 to July 2, 2003



Midwestern Regional Climate Center  
Illinois State Water Survey  
Champaign, Illinois



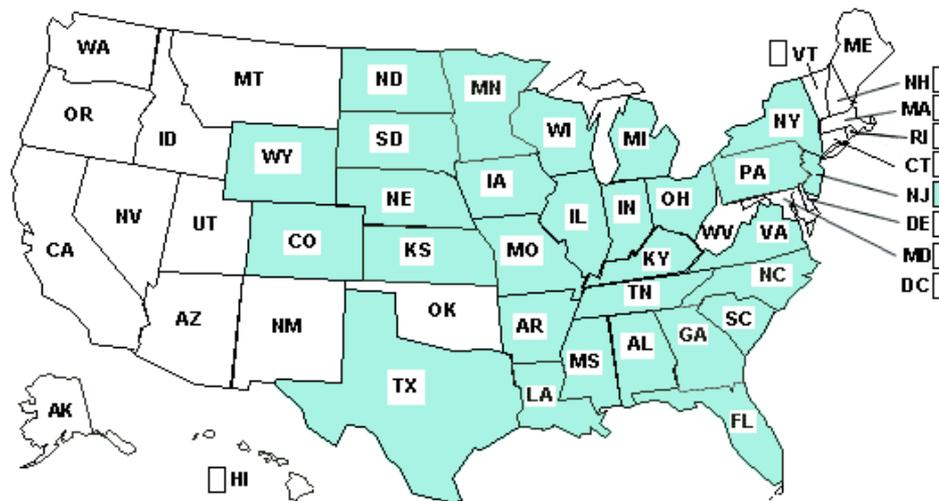
# Optimizing Climate Services Partnerships

## Partnering with Regional Climate Centers

### Partnership Examples: *RESEARCH*

West Nile Virus in the United States as of July 2, 2003\*

[Click on the map for a printer friendly version.](#)



**West Nile Virus Research**  
**Midwestern RCC**  
**Northeast RCC**  
**Southeastern RCC**

Verified avian, animal, or mosquito infections during 2003

Indicates human case(s)



# NIDIS Interagency Partners

## *Federal, State, Tribal, Local Levels*

**U.S. Department of Agriculture (USDA):** Agricultural Research Service, Cooperative State Research, Education, Farm Service Agency, Forest Service, National Agricultural Statistics Service, Natural Resources Conservation Service, Risk Management Agency

**U.S. Department of Commerce (DoC):** International Trade Administration, National Oceanic & Atmospheric Administration

**U.S. Department of Energy (DoE):** Office of Electricity Delivery and Energy Reliability, Office of Energy Efficiency & Renewable Energy, Office of Science

**U.S. Department of Homeland Security (DHS):** Federal Emergency Management (FEMA) Directorate

**U.S. Department of the Interior (DoI):** Bureau of Indian Affairs, Bureau of Land Management, Bureau of Reclamation, National Park Service, U.S. Fish and Wildlife Service, U.S. Geological Survey,

**U.S. Department of Transportation (DoT):** Federal Aviation Administration, Federal Highway Administration, Surface Transportation Board

**Environmental Protection Agency (EPA), Farm Credit Administration (FCA), Federal Energy Regulatory Commission (FERC), Internal Revenue Services, International Trade Commission (USITC), National Aeronautics and Space Administration (NASA), National Science Foundation (NSF), Small Business Administration (SBA)**

**Western Governors' Association** – a key sponsor of early NIDIS development efforts and ongoing concerns

**Western States Water Council** – represents water managers in the Western United States

**Regional Climate Centers** – collection, quality control, and analysis of data, weekly input to the Drought Monitor and Drought Impact Reporter

**National Conference of State Legislatures** – drought monitoring and mitigation activities will require state support, of which much requires state legislative involvement

**National League of Cities** – water availability and quality issues

**American Association of State Climatologists** – many of whom are active participants in the Drought Monitor

**National Drought Mitigation Center** – A national clearinghouse for Redrought-related information, research, mitigation measures, and operational home of the Drought Monitor and Drought Impact Reporter;

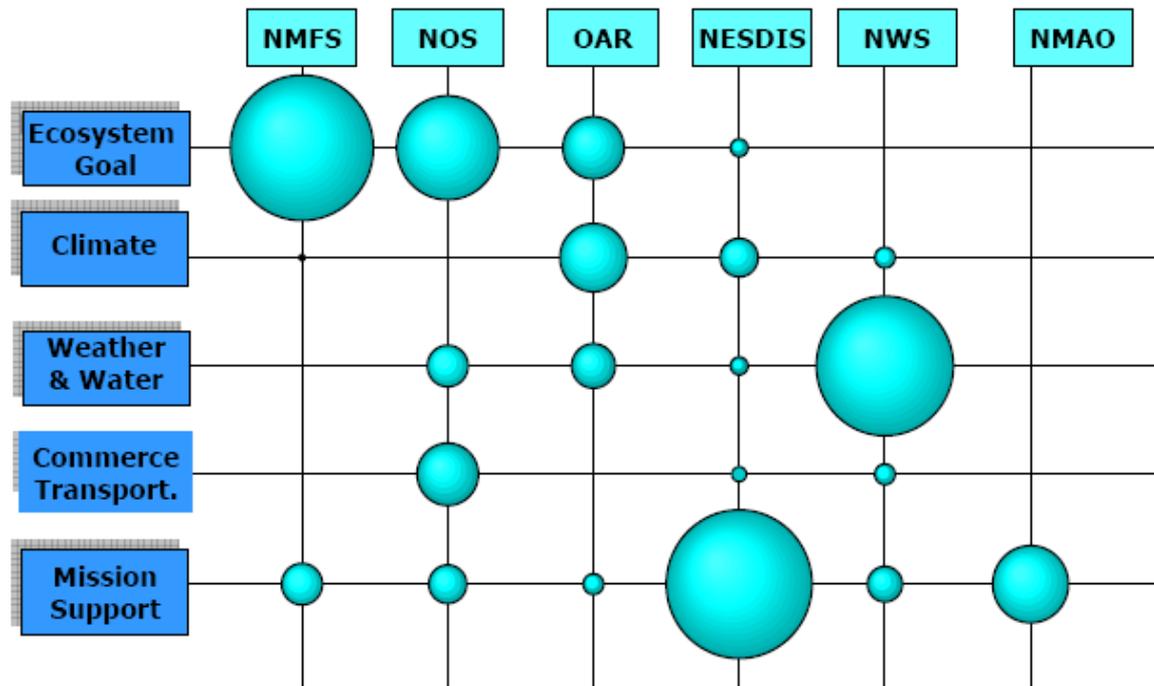
**Native American tribal governments** – mostly located in arid regions in which water is a vital concern



# NOAA "Partnerships" in Climate

## Three Line Organizations Budget climate

Figure II.C.2. NOAA's matrix structure integrating line offices and goal teams.



symbol area proportional to 2005 budget

Location of NOAA offices in the continental USA, by line office. Symbols are size-scaled by number of employees. NFA refers to NOAA Financial and Administrative Centers..

